Best Management Practices

Soybean "best management practices" discourage pests:

- Plant on fertile, well-drained soils, pH 6.5 or above
- Plant end of May
- Planting soybeans after soybeans is discouraged
- Survey to detect weed escapes, diseases, and other pests, and to evaluate crop condition.

Life stages of the seedcorn maggot, *Delia platura,* showing the egg, larva, pupa, and adult fly. Larva, 1/4 inch; adult, 1/5 inch. Illustration by Art Cushman, USDA; Property of the Smithsonian Institution, Department of Entomology, Bugwood.org

New York State Integrated Pest Management Program

We develop sustainable ways to manage pests and help people to use methods that minimize environmental, health, and economic risks.

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Find this brochure online at:
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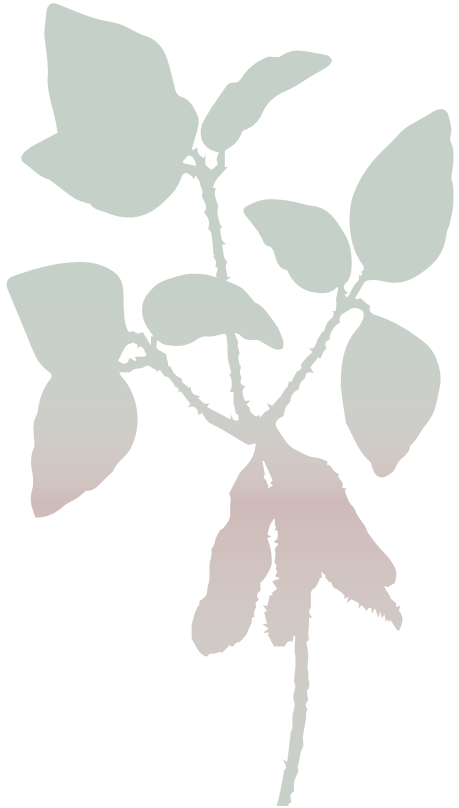
Soybean Pests: Insects

Management Guide



NEW YORK STATE Integrated Pest Management PROGRAM

Cornell University Cooperative Extension

Insect Pests

With soybean aphid suddenly on the scene, the rule of thumb about insect pests seldom causing yield loss on soybeans in New York may no longer apply. A couple of other insect pests have the potential to cause crop injury, too.

Soybean aphid

Aphids are small, yellow, with distinct black cornicles, or "tailpipes," on its hind end.

Colonies of tiny yellow aphids on soybean are indeed soybean aphid, as no other aphid species colonizes soybean in North America

Buckthorn, a shrub or small tree, is the fall, winter, and spring host for aphids.

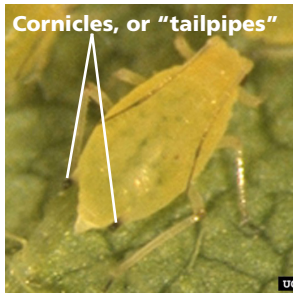
Soybeans are the summer host. Only females are present in the summer. These generations are born live and quickly grow to bear their own young within 7 days—producing up to 15 generations per season.

Populations may double in as little as 2-3 days.

The wingless form predominates. Winged aphids develop when they are crowded or the plant loses its food quality. Winged aphids fly en masse to other soybean plants or fields.

Soybean aphid can transmit several viral diseases. We don't yet know what the potential losses—or thresholds—are.

Soybean aphids. Photo: David W. Ragsdale, Texas A&M University, Bugwood.org



Soybean aphid. Photo: David W. Ragsdale, Texas A&M University, Bugwood.org

Seed corn maggot

Maggots are ¼ inch long, tapered, legless, pale yellowish white, and appear to be headless. They burrow into germinating seeds, which may fail to germinate; seedlings are weak and often die.

Associated with high organic matter, as in heavily manured fields. Damage is more severe in cool, wet spring weather that delays emergence of seedlings.

What to do:

- add seed treatment containing an insecticide to planter box.
- soybeans' remarkable ability to compensate often minimizes stand losses

Japanese beetle

Shiny metallic green or greenish-bronze beetles, about ½ inch long, have reddish-brown wing covers with white tufts of hair on sides and tip of abdomen.

Adults skeletonize leaves, which turn brown. This damage may be conspicuous but rarely causes yield loss.

Indeterminate soybeans can tolerate up to 35% defoliation until bloom, about 20% while pods are small and soft, and about 35% when pods are hardening.

Treatment for damage below these percentages isn't recommended.

Japanese beetle, adult, 1/2 inch. Photo: Russ Ottens, University of Georgia, Bugwood.org

Other Arthropod pests

Two Spotted Spider Mite

Mites are tiny, about 1/60th inch long. They live in colonies in a thin web on lower leaf surfaces. Feeding injury makes leaves look speckled; then they yellow, curl, and turn brown; plants often die.

Two spotted spider mites may cause problems during hot dry years. (Rain reduces risk.)

Two spotted spider mites, adults and eggs. Photo: David Cappaert, Michigan State University, Bugwood.org

Two spotted spider mites, damage. Photo: Whitney Cranshaw, Colorado State University, Bugwood.org